

REMARKS/ARGUMENTS

The Examiner is thanked for the review of the application.

The amendment to the Specification is to update the RELATED APPLICATIONS paragraph to reflect the current status of the related applications.

Claims 4-7 remain in this application. Claims 4, 5 and 7 have been amended. Claims 8-13 have been added. No new matter has been added.

In the Office Action dated September 21, 2006, the Examiner rejected Claims 4-7 under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. Regarding this rejection the Examiner has stated that “The claim(s) contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In particular, the last limitation of claim 4 states, ‘the length of the case section is dependent upon water weight volume of the casing, the bore diameter of the gun barrel, and the weight of the bullet.’ There is no indication, in the specification or claims, as to how it depends on these variables, and further, what value might be specified by these variable.”

Applicants respectfully direct the Examiner attention to paragraph 19 on page 7, and also paragraphs 25 and 26 on page 9 of the specification as filed:

“The present invention provides a firing platform for efficient cartridges determined by the water weight volume of the cartridge; determining the bore diameter of the gun barrel; determining the weight of the bullet; and **calculating the efficiency rating of the cartridge by multiplying the water weight volume by the bore diameter and dividing by the bullet weight**. The efficiency rating is optimal between 110 and 145 when the water weight volume is determined in grains, the bore diameter is determined in thousandths of inches and

the bullet weight is determined in grains. There are 7000 grains in one pound. One such efficient 50 caliber gun cartridge has a **casing diameter of approximately 0.688 inches and neck portion which accepts a bullet having a bore diameter of approximately 0.510 inches**. The case has a **preferred length ranging from 1.90 inches to 2.5 inches** measured from the primer to the mouth of the neck....

The gun chamber is configured to receive high efficiency **cartridges with a 0.688 inch diameter case and a maximum overall case length of 2.4 inches**. The result is a cartridge with the largest diameter case that is short enough to feed through a standard magnum length action and fit a standard magnum bolt face, and still have the capability of holding a minimum of 150 grains of powder. The bullet, from the cannelure forward (which is the part of the bullet that protrudes from the case), will always be 1½" long. This remains a constant.

All of the cartridge embodiments described below, are constructed by applying the efficiency ratio of the present invention. Based on a desired bullet weight and cartridge length, the bore diameter is then determined." (Emphasis added).

Applicants would also like to direct the Examiner's attention to paragraph 31 in page 11, and the detailed tables following that paragraph which describe in detail several exemplary efficient cartridges, thereby fully enabling one skilled in the art to fabricate the cartridges and corresponding gun chambers of the present invention without undue experimentation. Hence Applicants believe Claim 4 is in compliance with 35 U.S.C. 112, first paragraph.

In the same Office action the Examiner has also rejected Claims 4-7 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claim 4, the Examiner states “Claim 4 recites the limitation ‘the action’ in line 4, and recites the limitation ‘the casing’ in the last line. There is insufficient antecedent basis for these limitations in the claim.”

Accordingly, Claim 4 has been amended and now recites “the gun action ...” and “the cartridge case ...” in place of “the action” and “the casing”, respectively.

The Examiner also states “Claim 4 recites ‘an efficient 50 caliber gun cartridge.’ Although the specification implicitly defines efficient in paragraph 12 by stating that inefficient cartridges burn a more-than-average amount of powder, there is no indication what an ‘average’ amount of powder is. Thus, it is unclear what is encompassed by the term ‘efficient’.”

Claim 4 has been amended and the word “efficient” has been deleted.

The Examiner further states “A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by ‘such as’ and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 4 recites the broad recitation ‘the case section has a length ranging from 1.9 inches to 2.5 inches’, and the claim also recites ‘the length of the case section is dependent upon water weight volume of the casing, the bore diameter of the gun barrel, and the weight of the bullet,’ which is the narrower statement of the range/limitation.”

Claim 4 has been amended and the limitation “wherein the case section has a length ranging from 1.9 inches to 2.5 inches” has been deleted from Claim 4 and is now recited as a new dependent Claim 8. As such, Applicants believe that Claim 4 is now in compliance with 35 U.S.C. 112, second paragraph.

The Examiner states “Claim 5 recites the limitation ‘water weight’ where previously there was recited ‘water weight volume.’ If Applicant intends these to refer to the same value, corresponding terminology is requested.”

Accordingly, Claim 5 has been amended to recite “water weight volume” and is now compliant with 35 U.S.C. 112, second paragraph.

The Examiner asserts “Claim 7 states that the case section, shoulder section, neck section, and free bore section have a maximum length of 4.0 inches. It is unclear whether they individually have a maximum length of 4.0 inches, or in combination. Further, paragraph 25 of the Specification states that the overall case length is 2.4 inches.” The Examiner requests appropriate clarification.

Applicants respectfully submit that paragraph 30 and Figure 3 of the specification which states “The case section 52, shoulder section 54 and neck section 56 are machined to accept gun cartridge 10 of the present invention. Free bore section 58 is for aligning projectile 12” explains the difference between the overall lengths of the cartridge and gun chamber is due to the additional free bore section which is used to align the projectile. In addition, Claim 7 has also been amended to clearly claim the “maximum total length” of the gun chamber. Accordingly, Claim 7 is now in compliance with 35 U.S.C. 112, second paragraph.

Regarding all the claims rejections and upon reading of the claims, the Examiner states “it is unclear whether Applicant has intended to claim a gun chamber *for use with* a cartridge or a gun chamber *in combination with* a cartridge. The claims are replete with functional language (e.g. for use with, configured for, etc.) with respect to the cartridge, but place limitations on the cartridge as well.”

Applicants’ claims as amended are now clearly directed at gun chambers for use with corresponding cartridges. For example Claim 4 recites: “configured for accepting a 50 caliber gun cartridge ...”, “a case section ... configured for housing a cartridge case”, and “a neck portion ... configured for accepting a cartridge ...” Further, since Applicants’ gun chambers are designed to

Application No. 10/758,845
Amendment Dated January 22, 2007
Reply to Office Action of September 21, 2006

accept gun cartridges of the present invention, limitations of the gun chambers can also be derived from limitations of the corresponding cartridges.

New method Claims 9-13 have been added and they correspond to apparatus Claims 4-8, respectively. No new matter has been added.

In sum, Claims 4, 5, 7 have been amended and are now believed to be in allowable form. New Claims 8-13 have been added and are also believed to be in allowable form. Applicants believe that all pending Claims 4-13 are allowable and respectfully request a Notice of Allowance for this application from the Examiner.

Applicants hereby petition for a one-month extension of time within which to respond to the referenced Office Action and has authorized the commissioner via EFS to charge our Credit Card in the amount of \$60.00 to cover the necessary fee. The commissioner is authorized to charge any additional fees that may be due to our Deposit Account No. **50-2766** (Order No. **FAS-003-US**). Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at telephone number 925-570-8198.

LAW OFFICES OF KANG S. LIM
PMB 436
3494 Camino Tassajara Road
Danville, CA 94506
Voice: (925) 570 8198
Facsimile: (925) 736 3974

Respectfully submitted,

/Kang S. Lim/

Kang S. Lim
Attorney for Applicant(s)
Reg. No. 37,491

CUSTOMER NO. 36088